English

keepower XL-pro Charger

Thank you for purchasing a keepower XL-pro battery charger, a choice that reflects your technical knowledge and ability to appreciate quality products.


Before charging, please read the operating instructions.


Protect charger from moisture and keep dry.

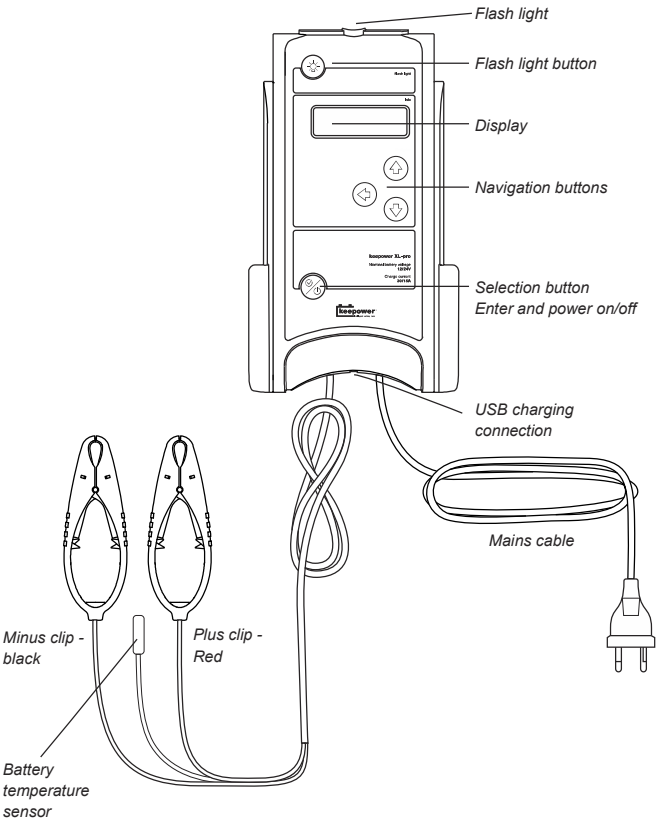

Turn off the charger before attaching and removing the charging clamps.


Risk of explosion! Avoid fire, open flames and sparks.

Warnings

- Before charging, please read the operating instructions.
- Protect charger from moisture and keep dry.
- Battery acid is highly corrosive. Acid on the clothes should be rinsed off immediately in running water. In case of acid on the skin or in the eyes, rinse thoroughly in running water and contact a doctor.
- Disconnect mains supply before connecting or disconnecting the battery clamps.
- Never charge in vicinity of open flames or any equipment which may produce sparks. A battery may produce explosive gases during charging and good ventilation should therefore be ensured if charging takes place indoor.
- The charger has to be placed on a solid surface or hanged on the wall with good ventilation.
- The charger may not be covered up or exposed to direct sunlight.
- The battery manufacturer's advices have to be followed carefully.
- The charger can only be used for rechargeable lead/acid, GEL or AGM batteries.
- The charging cables can only be changed to other keepower cables.
- In case of damaged cables the charger cannot be used.
- Repair of the charger may only be done by an authorized shop.
- Place the charger in horizontal position to obtain the IP class.

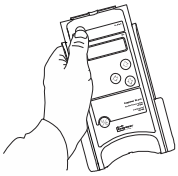
The keepower XL-pro Charger kit



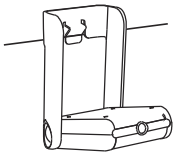
How to install the charger

The charger can be installed in 4 different positions while placed on a flat surface, hanging on an edge e.g. a car window or screwed to a wall.

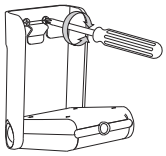
As a stationary device



As a handheld device.



As a device hanging on an edge.



As a device on the wall

Navigation in the menu

There are 4 buttons for navigation in the menu.

Arrow Up is used for moving the cursor up in the menu

Arrow Down is used for moving the cursor down in the menu

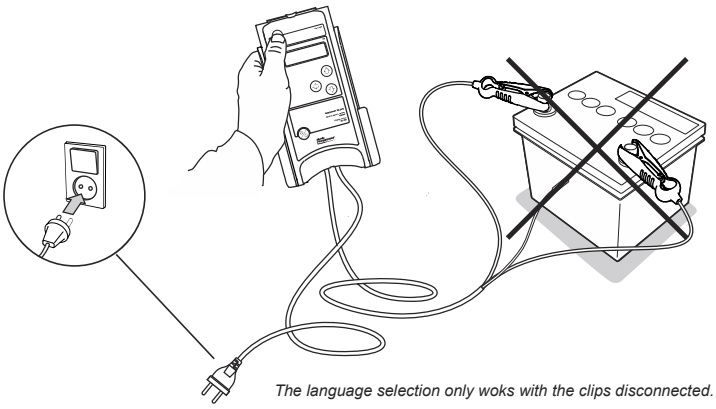
Arrow Back is used for going back to the previous menu

Select buttons has two functions:

- Making a selection in the menu
- Turning the charger on and off by pressing the button for minimum 3 sec.

Selection of language

The selection of the menu language is done without a battery connected (charger connected to Mains). The menu language selection is activated by pressing the ⊙ back button, scrolling to the language to be used and selecting the language by pressing the ⊙ "Select" button.



The language selection only woks with the clips disconnected.

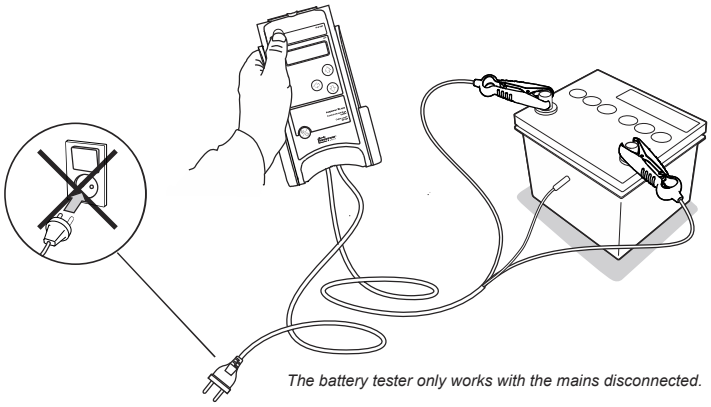

```
  DEUTSCH
> ENGLISH
  DANSK
  SVENSKA
```

Activate language selection

Scrolling to select the language

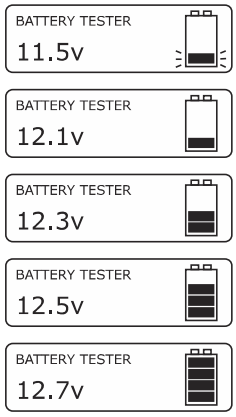
Select language

How do I test a battery



The battery tester only works with the mains disconnected.

Connect the clamps (Red to + and Black to -) to the battery first to let the Battery tester determine the charging state of the battery and display it to you. For reliable reading, the battery should be at room temperature (20 ºC), and it must have been resting for at least 4 hours (no charging has taken place either in the vehicle or using the keepower Intelligent Battery Care charger). If charging has taken place within the last 4 hours, a higher reading will be the result. Testing of the battery will always take place before charging, enabling the keepower Intelligent Battery Care system to give the optimum charge to the battery.



Deep discharged
voltage <11.95V

Discharged
voltage >12.05V

Low
voltage >12.25V

Medium
voltage >12.45V

Full
voltage >12.65V

The battery tester indicate 5 stages of the battery.

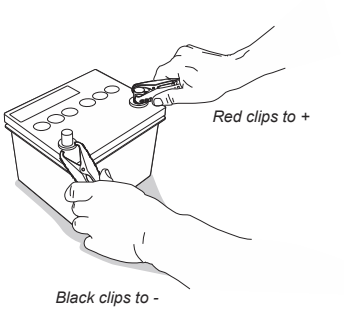
Full: There is no reason to charge. However a small top-up charge can normally be added.

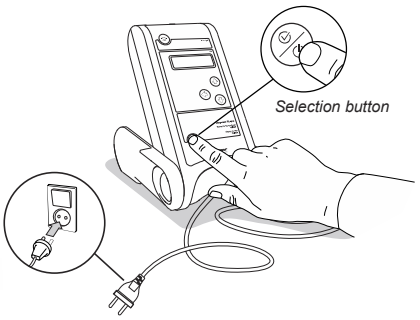
Medium: The battery can be charged with in the normal charging mode.

Low: The battery can be charged with in the normal charging mode.

Discharged battery: If you need to use the battery fast the intelligent Boost mode can be used. Otherwise softcharge is activated automatically when charging starts (recommended).

Deep Discharged: If battery symbol is flashing Immediate charging is needed. Charging will start with Softcharge. Intelligent Boostcharge can be selected for fast charging. Use of Softcharge is recommended.





How do I charge and select different charging modes

The different charging modes are selected in the menu.

CHARGE **Normal charging** is used on normal batteries (Wet, open type), maintenance-free, GEL, AGM and sealed battery with a gas limit at 14.0V or 14.4V in Bulk charging, and 14.4V or 14.8V in After-charge. (battery type is selected for determining the gas limet). In the display the current voltage on t he battery is showed together with the charging current

BOOST **Boost mode** is used when trying to repair deep discharged batteries, and is further described under "The intelligent charging curve".
In the display the current voltage on the battery is showed together with the charging current

SUPPLY **Supply Mode** is used as a power supply when e.g. the car is in a showroom and the cars facilities is used without the motor running. In case of overload, a warning is giving in the display. If heavy overload, the charger switches off to protect it self.

A battery has to be connected for activation of "Supply mode"

Please note that spark protection is not active when in supply mode.

Menu tree

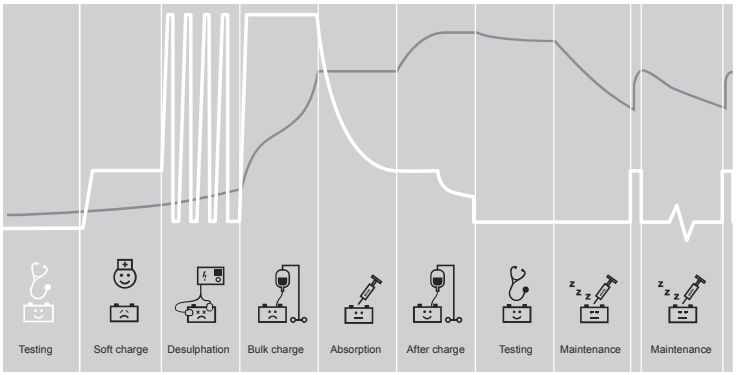
Actual number of selections might vary due to customisation.
Example menu tree:

Battery not connected

- Select language
  - Dansk
  - English
  - Deutsch
  - …

Battery connected

- Charge
  - Select voltage
    - 12V
    - 24V
  - Select Ah
    - 3 to >200
  - Select Battery type
    - WET
    - GEL
    - AGM
- Boost
  - Select voltage
    - 12V
    - 24V
  - Select Ah
    - 3 to >200
  - Select Battery type
    - WET
    - GEL
    - AGM
- Supply
  - Select voltage
    - 12V
    - 24V



The intelligent charging curve

Soft charge (Indication on screen)
The “Soft charge” phase is used when the battery is deep discharged. The battery is charged until it is ready to receive normal charging (11.6V) and then the normal charging is started.

Desulphation (Indication on screen)
The “Desulphation” phase is used if the battery has not been used for a longer period.

Bulk charging (Indication on screen)
The “Bulk charging” phase is the phase where the battery under a constant current is charged up to app. 85% of the full capacity.

Absorption (Indication on screen)
The “Absorption” phase is the phase where the battery under a constant voltage is charged up to app. 98% of the full capacity.

After charging (Indication on screen )
The “After charging” phase is the phase where the battery is charged up to app. 100% of the full capacity. The voltage is raised 0.4V compared to the Bulk charging phase.

Testing (Indication on screen )
The “Testing” phase is the phase where the battery is tested for a defect battery cell.

Maintenance (Indication on screen )
The purpose with “maintenance” phase is to keep the battery at 100% capacity over a long period of time. The charger is always measuring the voltage and when it goes below 12,6 / 25,2 V it will start charging the battery.

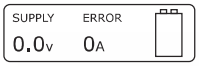
Boost (Indication on screen )
The “Boost” phase is used to kick-start the battery if it has low power. This “Boost” is made as an intelligent boosting. This means that the charger is boosting the battery for ½ hour with maximum current and then a test is made of the battery to see if it is ready for normal charging. If the battery is not ready for normal charging, the charger will boost again. This process is repeated 4 times and if the battery is not Ok after that the charger will indicate a fault.

While charging

While charging the actual voltage, current and the selected battery type is shown in the display. It is also possible to see how many Ah has been charged to the battery (not the total Ah on the battery) This is done by pressing the down button.

It is possible to stop the charging by pressing the ⏲ Back or % Select button.

Error indication



The charger is excessive overloaded in the supply mode

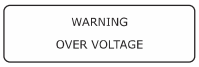
The charger is overloaded in the supply mode

The charger has lost the mains supply during charging

The charger needs service because it have failed during the self testing

No battery is connected

The clamps are shorted



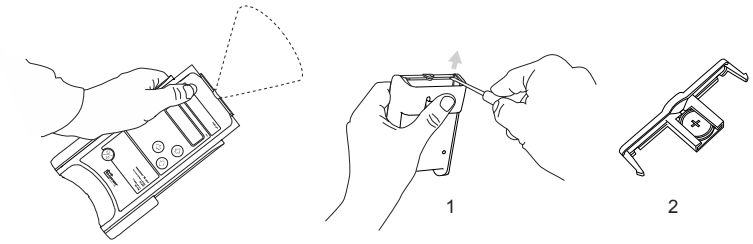
A battery with a voltage over 32V have been connected

There can be two reasons for no indication in the battery tester during testing:

- The battery in the car is deep discharged.
- Wrong polarization of the clamps on the battery.

Maintenance

The charger can be cleaned with a moister cloth. Running water and detergent contained solvent may not be used.
Repair of the chargers may only be done by an authorised shop and that included replacement of the battery cables.



Flash light

The charger contains a flash light to be used as a small working lamp when using the charger in a dark room.
The flash light is using an intern battery so it can be used with or without the mains connected.
The flash light can be replaced. Please order sparepart no. 4500 4105 (see picture 2).

Temperature sensor

The keepower XL-pro version has a temperature sensor in the battery clamps. This sensor is used to adjust the charging parameter while charging the battery.

USB connection

The USB connection can be used for other devices (Mobil phones, Ipod) whichneed to be charged. This is done by using the connector delivered together with the devices that need to be charged.

Guarantee

Keep valid receipt or guarantee card. To obtain guarantee within the guarantee period, it is an absolute must that, either a valid receipt or guarantee card is submitted to service station together with the appliance.